Crafting Innovative Insurance Products

“Climate changes could change the profile of risks that we are paid to assume, including weather-related property damage and other natural disaster-related property and casualty losses ... Potential opportunities for us could be the development of new risk management products for clients concerned about climate-related risks to their businesses.”

-Travelers Insurance Company (2005)

In order to avoid the worst physical impacts of climate change, the world will need to dramatically transform the way it produces and consumes energy. Insurers have an enormous opportunity to develop new profit centers by providing innovative insurance products (or adding terms to existing policies) for energy users or providers of clean energy services. Insurers can also tap their core competencies to offer new services to assess and mitigate climate risks. Such activities would naturally develop into new business lines in energy auditing, retrofit evaluation, installation and management, as well as a host of quality-assurance services (e.g. commissioning) that manage the performance risks of energy saving and carbon-offset projects. New products such as “micro-insurance” are being introduced for those in the developing world currently lacking access to insurance.

New Insurance Products for Energy Service Providers

Various specialist groups that provide energy-efficiency services often lack access to appropriate insurance coverage. In one example of filling this void, Lockton Risk Services has developed a package of professional liability, general liability, and property coverage for professional home energy auditors (Figure 6). Eligible providers must be members of RESNET, the leading national professional organization of building energy performance certifiers. Commissioning providers are another group for whom a “program insurance” package could be crafted.

Energy-Savings Insurance

Energy savings insurance is an innovative product in which policies protect the installer or owner of an energy efficiency project from under-achievement of predicted energy savings. Recent studies have emphasized the importance of energy efficiency, concluding that any attempt to significantly lower global GHG emissions will need to derive half or more of its reductions from greater efficiency and conservation. Given this vast potential, and the nascent state of the ESI market, this is an area where increased insurer activity could have a major impact.

A prior study identified 12 past and present providers, and a potential $1 billion market in the U.S. alone. There are some market drivers for ESI. For example, some state statutes require a contractor to obtain a performance and payment bond relating to the installation of energy efficiency measures in an amount equal to the predicted savings. The Canadian government requires ESI or performance bonds to guaranty the energy savings on all energy saving projects conducted in government facilities.

Renewable Energy Project Insurance

The global market for renewable energy is projected to grow from $55 billion in 2006 to over $225 billion in 2016.

A recent survey found that many insurers offered at least one of eight forms of insurance for renewable energy projects, but many barriers were also noted. AXA has built up a comprehensive insurance offering for wind farms, which generated $14 million in premium revenues in 2006. Munich Re has successfully piloted exploration-risk insurance for geothermal energy companies. Growth in availability of such insurance is contingent on improved technical expertise within the insurance industry, processes for commissioning installations (to catch and correct problems at project startup), improved actuarial and performance data, and bundling of small scale projects and packaging of risks to achieve economies of scale, risk diversification and underwriting profit.

New products are emerging to manage performance risk for renewable energy systems. One example is wind power derivatives, in which payments are made to the producer if revenues fall below a pre-determined level, and, conversely, payments made to the derivative provider if performance exceeds expectations. London-based Willis Holdings and Tokio Marine & Nichido offer such products. Sompo Japan Insurance offers renewable-production insurance derivatives for both wind and solar-electric systems. Emblematic of the expansion of traditional energy insurers into alternatives is Navigators Group’s new focus on wind energy. The company’s Offshore Wind Turbine segment will include insurance for project cargo, contractor’s all risks, start-up delays, operational material damage, business interruption and third party liability.

By increasing certainty around revenue, such products can make it easier for renewable energy projects to attract investment and financing. Renewable energy projects are, of course, also susceptible to conventional risks, e.g. equipment breakdown, business interruptions, or losses from natural hazards. In some cases with relatively high risks (e.g., offshore wind) insurance availability will be very limited, and in other cases the emerging nature of the technologies will correspond to higher perceived risk.

In 2007, Aon created a new agri-fuels group to offer risk-management services for the emerging biofuels industry.
Green-Buildings Insurance

With the rise in popularity of “green building” practices (residential green building alone is expected to be a $40 billion to $50 billion market by 2010), insurers have begun to consider new products for this arena. Many risk-management benefits have been associated with green buildings. [xvii] ranging from improved indoor air quality to enhanced disaster resilience, and there are numerous ways in which insurers could capture these benefits. [xviii] An oft-cited case study of the loss-prevention benefits of green buildings (in this case reduced risk of business interruption) is the Harmony Resort on the island of St. John, which weathered hurricanes Marilyn, Bertha, Georges, and Lenny with no loss of (solar) power or (solar) hot water, while operations on other facilities on the islands were disrupted for weeks or months. [xix]

In 2003 Sompo Japan Insurance—a $10-billion company—introduced commercial insurance coverage for the incremental costs of green measures (recycled materials, energy efficient products, green roofs) following loss. [xx] Certain Travelers boiler and machinery policies contain a provision that provides for up to 25 percent of the incremental costs of newer generation replacement equipment, including that which is more efficient and environmentally friendly. [xxi] Lloyds TSB offers similar coverages for renewable-energy equipment in buildings.

Fireman's Fund introduced several new “GreenGuard” insurance coverages for non-residential customers in 2006, becoming the first U.S. insurer to do so (Figure 8). Now approved in all 50 states, the policy is aimed at customers who have built green from the ground up (5-percent premium credit), have made green renovations to existing buildings, or want to rebuild green after a loss. The rationale is that buildings with these features are less susceptible to future losses. GreenGard has been successful in the marketplace and has helped to authenticate the importance of green building in the real estate and commercial construction industries, as well as elevating the discourse surrounding the emerging field of green financial services. The Green Upgrade form, which gives building owners the advantage of rebuiding and replacing with green alternatives for buildings that are looking to go green, has been the most popular form of coverage. The coverage has been expanded to include Builders Risk, which covers the additional time and cost taken after a loss has occurred to maintain green certification, also known as “soft costs” or delays in construction process. Fireman’s Fund is integrating and expanding green coverage into more commercial lines. Some of the commercial products that currently include green coverage options are: Senior Living, Historical Properties, and Durable Goods. In addition, Fireman's Fund Commercial business is working with its Personal Lines unit to develop a green product for homeowners. Meanwhile, the company is “walking the talk” by greening five floors it just occupied in Dallas, including construction material recycling, reclaimed and sustainably grown wood, and water efficiency.

A member company of American Insurance Group is introducing the first known green-buildings insurance product for residential customers, as well as the latest example of special coverages for green non-residential buildings (Box B).

Box B

Lexington Insurance Company Offers New Green-Buildings Products for Residential and Commercial Properties

Lexington Insurance Company, a member of American International Group, Inc. is launching Upgrade to GreenSM, two new green-buildings programs in 2007, to be deployed as endorsements to standard homeowners and commercial property insurance policies. The endorsements allow residential or commercial properties to be rebuilt to higher green standards following a partial or complete loss.

Upgrade to GreenSM Residential

In the event of a partial loss, paid claims will cover certain products and materials identified as having “ENERGY STAR” or equivalent levels of energy efficiency. Specifically covered will be repairs or replacements of damaged or destroyed lighting systems, heating and cooling equipment, windows, insulation, appliances, home electronics, and electronic office equipment. Claims adjustment can also include indoor plumbing for improved water efficiency, low VOC paints and adhesives, rapidly renewable interior wood products, sustainably produced framing materials, and floor covering with recycled content. In the event of a covered total loss, the policy will pay to rebuild to the requirements specified in the applicable Energy Star Builders Option Package, and for a contractor participating in the Home Performance with ENERGY STAR program to rebuild; it will also pay for a RESNET certified home energy rater to verify compliance with ENERGY STAR, and to verify operation and optimization of the heating, ventilating, and air conditioning equipment.

Upgrade to GreenSM is the first of its kind green homeowner property insurance policy offered in the United States.

Upgrade to GreenSM Commercial

In the event of a covered loss, the commercial program allows an insured that is not currently LEED® certified to rebuild using LEED® Silver criteria. [xxii] It also allows an insured that is currently LEED® certified to rebuild to higher level of LEED® certification if such a level is available. Moreover, additional coverage is provided for: recycling materials, as opposed to disposing of the materials in a landfill; flushing out reconstructed space upon construction completion; hiring a LEED® accredited architect or engineer to participate in the design or reconstruction of the damaged portion of the building; and, hiring a Professional Engineer to commission or re-commission systems. If the building is already LEED® certified, the coverage will also pay registration and certification fees charged by the United States Green Building Council (USGBC) incurred if the building needs to be recertified.

One of the Lloyds of London syndicates offers a “Naturesave” product from which 10 percent of homeowner, personal accident, and travel insurance premiums are redirected towards energy and environmental projects. Its commercial property policy emphasizes the compatibility of sustainable development and risk management, with 10 percent of premiums being donated to environmental projects and environmental performance surveys and financial assistance in reducing carbon emissions offered to policyholders. [xxiv]

Coping with the challenging issue of mold and moisture, which is expected to worsen under climate change, is also related to the buildings arena. Insurers have traditionally refused to insure mold risks, but some are recognizing that this risk is insurable if appropriate risk-management measures are taken (many of which also enhance energy efficiency). [xxv]

By making a previously uninsurable risk insurable, insurers open a large new market for themselves while also benefiting consumers.
Insurance for the Developing World

Most of the world’s population cannot afford insurance. Compounding the problem, residents of the developing world are also often the most vulnerable to the impacts of climate change. Yet, growth of insurance in these “emerging markets” is the future of the industry, which has otherwise reached relative market saturation in the industrialized countries.

Insurers are beginning to explore these opportunities, finding ways to grow their business while helping to manage and spread the risks associated with climate change.[xxvi]

Notably, the Munich Climate Insurance Initiative (led by Munich Re) is identifying insurance-related climate change solutions such as micro-insurance and conducting pilot projects and education within the industry (Figure 9). A number of individual insurers and reinsurers are offering micro-insurance products, among them Eureko Re (Netherlands), Pakisama Mutual Benefit Association (Philippines) AIG-Uganda (Uganda), and Trinity Life Assurance Company (Tanzania).[xxvii]

Swiss Re created one such project in 2007—which it calls the Climate Change Adaptation Program—that utilizes model results and satellite data to determine when up to $2 million in weather-derivative claims are to be paid in response to severe drought conditions causing food shortages in selected villages in Kenya, Mali, and Ethiopia representing 400,000 inhabitants.[xxix] Swiss Re’s earlier weather-risk products had been sold to 320,000 small farmers in India.

Initiated in 1993, CDMP was a project of the U.S. Agency for International Development, implemented in several countries by the Organization of American States, to promote sustainable public/private disaster mitigation mechanisms that lessen loss of life, reduce potential damage, and shorten disaster-recovery periods. Project activities included support for national insurance associations in organizing technical conferences, disseminating hazard and risk information, and producing hazard and risk maps and information to promote safer location of development.[xxx] Beginning in 1998, Barbados-based United Insurance began a program in which homeowners and businesses can qualify for significant reductions in insurance premiums if they retrofit homes and buildings to better withstand hurricane wind forces. The project operated in Dominica, Saint Lucia, Saint Kitts/Nevis, Antigua, and Barbuda and trained 145 homebuilders.[xxxi]

In the Antigua-Barbuda Pilot Project, 100 homeowners and three of the country’s major insurers participated. In the Hurricane Resistant Home Improvement program, a U.S. non-governmental organization strengthened the capacity of local builders to offer disaster-resilient homes using home improvement loans from local banks. In St. Lucia, a group insurance policy was obtained for participants. Possibilities for leveraging efforts to date include incorporating village-scale measures with joint adaptation/mitigation qualities.

References:

[i] Submission to the Carbon Disclosure Project #3, http://www.cdproject.net/
[x] See response to Carbon Disclosure Project questionnaire.


[xxii] See http://www.natresnet.org/

[xxiii] For a description of the LEED rating system, see www.usgbc.org/LEED/

[xxiv] See http://www.naturesave.co.uk/


